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ABSTRACT

Preschool children's fears of animals and the dark were investigated in an effort to examine how preschoolers use play as a medium for expressing fearful emotions. A total of 48 children participated in the study. Interviews with parents were used to identify 12 preschoolers who were anxious about the dark and 12 who were anxious about dogs; 24 children were rated by parents as not being anxious about these experiences. Each child was invited to create stories about topics suggested by the experimenter. Some topics included benign themes popular in children's play; other themes reflected fears of dogs and darkness. Each child's videotaped play session was coded by three independent judges on measures assessing the maturity, duration, imaginativeness, aggression, concentration of play, and other factors. Children who were anxious about dogs played less constructively and at a less mature level in regards to that topic than did children not anxious about dogs. But children anxious about the dark were able to engage in well-developed pretend play when playing about benign themes and about the dark. These children tended to include more aggression in their play, especially when the story involved the dark. It is suggested that findings have implications for the use of play in therapy with children. (Author/RH)

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PLAYING WITH FEAR:

CHILDREN'S PLAY AND ITS ROLE IN EXPRESSING FEARS

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ABSTRACT

Young children in all cultures spend much time playing. Because knowledge about the self and the physical and social worlds grows rapidly during childhood, many theorists have speculated that play may be intimately related to these achievements. Following this reasoning, others have argued that play may be a useful tool in applied work with children for revealing and/or reducing children's anxieties and concerns. The study reported here examines how children's concerns or fears are mirrored in the structure and style of their play.

It is known from other research that children have certain characteristic fears that change with age. Among preschoolers, a high incidence of fears of animals and of darkness is reported in many studies. These two fears were therefore used to examine how play is used as a medium for expressing these concerns. Based on interviews with parents, 12 dark-anxious preschoolers and 12 dog-anxious preschoolers were selected. The remaining 24 children were rated by their parents as not being anxious about such experiences.

Each child was invited to create stories about topics suggested by the experimenter. Some of the topics included benign themes popular in children's play, while other themes reflected fears of dogs and of darkness. Each child's videotaped play session was coded by three independent judges on measures assessing the maturity, duration, imaginativeness, aggression, and concentration of the play, along with other factors.

Dog-anxious children and dark-anxious children showed very different play patterns. Children who were anxious about dogs played less constructively about that topic and at a less mature level than children who were not anxious about dogs. Dark-anxious children, however, were able to engage in well-developed pretend play both when playing about benign themes and when playing about the dark. These children tended to include more aggression in their play, especially when the story involved the dark. The results from this study suggest that children can use play to express their fears and concerns. These findings also have implications for the use of play in therapy with children.

Playing with Fear:

Children's Play and its Role in Expressing Fears

Young children spend a great deal of time playing. The exuberance, joy, and imaginativeness of much of children's play mark it as a unique behavior. Indeed, for many people play seems to capture the essence of early childhood. Given that children in all cultures devote so much time to this activity, the role of play in human development has intrigued writers from many backgrounds and disciplines for centuries.

Because knowledge about the self and the physical and social worlds grows rapidly during childhood, many theorists have speculated that play may be intimately related to these achievements. Following this reasoning, many others have argued that play may be a very useful tool in applied work with children for revealing and/or reducing children's anxieties and concerns (e.g., Axline, 1969; Erikson, 1963, 1972; A. Freud, 1928; S. Freud, 1909/1955, 1920/1955; Winnicott, 1971). Although many schools of therapy employ play or play settings for the diagnosis and/or treatment of disturbed children, there has been little research examining some basic assumptions made concerning the function of play in these applications.

One of these assumptions is that children's fears and distressing cognitions are expressed in their play. The reasoning behind this assumption is that because young children have relatively limited verbal skills, they may not be able to talk directly about their everyday fears and concerns and may need to find an alternative method of expression. The symbolic representations in children's play may better serve this communicative function. For example, Inhelder and Piaget (1954) point out that the form and complexity of adult language, not yet fully mastered by young children, may be unsuitable for adequately expressing and/or meeting young children's affective needs. For this reason, they postulate, young children create their own system of symbols and signifiers – those found in pretend play. Anna Freud (1965) also thought that young children's verbal ability for emotional expression was relatively weak and that children preferred to "act out" thoughts, fantasies, and conflicts rather than to talk about them, and this opinion is echoed by many other child therapists. Thus, while it has little empirical support at this time, one basic assumption about the function of children's play is that children who may not express everyday concerns in words may be able to do so in play.

Approaches using play as a vehicle for treating fears and concerns rest on the assumption that significant discovery and re-learning can occur within the domain of play and that these achievements can generalize to cognitions, strategies, and behaviors that lie beyond the domain of play. For example, play may provide a "testing ground" for children to experiment with different roles, views of the self, and strategies for confronting threat, thus enabling children to experiment with and acquire new behaviors and new

views of the self. Therapists working from this assumption (e.g., Axline, 1969; Erikson, 1963; 1972) claim that play is an active attempt at problem solving by children. They argue, as did S. Freud, that play furnishes children with opportunities to act out situations that are confusing, conflicting, or disrupting. Over and over again in play, children can re-create distressing situations so that they can become the "winners," thus enhancing a sense of mastery or competence.

For these reasons, play has been assumed to be useful for discovering the nature of young children's concerns as well as providing a mechanism by which children can resolve or master these concerns. In the following sections I review studies that have attempted to test these proposed anxiety-revealing and anxiety-reducing properties of children's play.

Play as Anxiety-reducing

Several studies have examined play in children who have been hospitalized to test the notion that play may serve to reduce anxiety. Cassell (1965) reports that children who played with puppets before undergoing medical procedures were rated as less disturbed during the procedure than children who had not had the play opportunity. In addition, the children in the play condition expressed to their parents more willingness to return to the hospital for further treatment. Johnson and Stockdale (1975) also found that children who were prepared for their surgery experiences by a brief puppet show were less anxious about the procedure compared to children who were not prepared in this manner. Gilmore (1966) provides moderate support for the hypothesis that when children are anxious (e.g., about to under surgery) they will prefer to play with toys on the basis of their relevance to the source of the anxiety (e.g., prefer to play with hospital-type toys). It can be argued, however, that the children choose toys on the basis of their salience rather than for their association with anxiety (cf. Hutt, 1979).

In a related vein, Burstein and Meichenbaum (1979) suggest that play may help children in the "work of worrying." They hypothesize that if children choose to play with toys symbolically loaded for medical content, thoughts and fantasies about the medical procedures will be stimulated and these cognitions will help children cope with the stress invoked by the procedures. They did identify a group of children who actively played with stress-related toys prior to being hospitalized. These children later reported lower anxiety following surgery. Burstein and Meichenbaum, however, also identified a second group of children who did not appear to use play to assist with the "work of worrying." Children in this group were highly defensive, avoided playing with the anxiety-related toys, and reported high anxiety following their surgery. Although Burstein and Meichenbaum ascribe this high post-surgery anxiety only to the children's reluctance to play with the toys, it is possible that the stress-related toys further sensitized them and increased their anxiety. Neither this study, nor the studies by Cassell (1965), Gilmore (1966), or Johnson and Stockdale (1975), however, report any information concerning the nature of the children's play in these situations to provide insight into the underlying processes which may be involved in successful reduction of anxiety through play.

More recent research by Barnett (Barnett, 1984; Barnett & Storm, 1981) has provided some evidence that play can help children reduce the anxious effects of a recently experienced unpleasant event. Barnett and Storm (1981) report that children who viewed a conflict-inducing film showed less physiological anxiety and more positive affect after a free play session compared to children who viewed a neutral film. More convincing support for the anxiety-reducing effect of play would have been provided if this study had included a group of children who viewed the conflict-inducing film but were not allowed the opportunity to play afterward. Barnett (1984) included such a group in her investigation of the role of play in reducing the anxiety caused by the departure of children's mothers on the first day of school. The results show that highly anxious children in the play condition exhibited less anxiety than highly anxious children who had no opportunity to play but only listened to a story. Unfortunately, these studies, like the studies described in the previous section, provide no clear information about what the children were actually doing in these play sessions. That is, the data do not help in determining what characterizes the play of anxious children and what activities in children's play may lead to a reduction of anxiety.

A study by Milos and Reiss (1982) compared three different play therapy procedures to test the hypothesis that play can reduce anxiety. Preschoolers who demonstrated separation anxiety at school were assigned to free play, directed play, modelled play, or control groups. In the directed play group, separation themes were introduced by the experimenter. Children were shown a mother doll and it was explained that she was bringing the child doll to school. In the modelled play group, children watch the experimenter act out stories focusing on separation scenes at school, incorporating feelings of fear and anger, as well as positive responses on the part of the child. Children in all three play conditions showed lower post-session anxiety levels, as measured by a speech disturbance score. In addition, a global quality of play measure was associated with the anxiety measure, indicating that higher quality of play was related to lower levels of post-session anxiety. Although this study provides support for the hypothesized anxiety-reducing aspect of play, it can not point to specific attributes of play that seem most critical for reducing anxiety.

Limitations of Past Work

While there are many reports in the clinical literature describing various treatment uses of children's play, they often tend to present individual case studies, typically of children with emotional problems severe enough to come to the attention of a therapist. Overall, there are very few studies designed to test the kinds of general assumptions so often used implicitly in therapeutic work with children. Further, there are several limitations in these few existing studies. First, many researchers fail to specify what behaviors qualify as play (e.g., Barnett, 1981; Barnett & Storm, 1984; Burstein & Meichenbaum, 1979; Cassell, 1965; Gilmore, 1966). In order to better understand and use these research findings, it is critical to know more about the kinds of behaviors being observed. Another shortcoming of some studies is the use of very broad categories as the only measure of differences in play between groups or across situations (e.g., Barnett, 1984), thus obscuring

much useful information. Other research focuses on what objects and/or conditions are associated with more or less time at playing (e.g., Barnett & Storm, 1981; Burstein & Meichenbaum, 1979; Cassell, 1965; Gilmore, 1966). Although these data are an important first step, more informative data could be obtained by also examining qualitative differences in the nature of play under contrasting circumstances. This type of approach would require a variety of measures to examine a large range of play behaviors.

Play as Anxiety-revealing

Research examining the play of atypical children (e.g., autistic, psychotic, or schizophrenic children) indicates that it may not be the content of play which differs from that of normal children, but rather its structure, style, and cohesion (Behar & Rapoport, 1983; Clune, Paolella, & Foley, 1979; Haworth & Menolascino, 1967; Millar, 1968). Disruptions and rigidity in the fantasy play patterns of emotionally disturbed children have been noted frequently (Rubin, Fein, & Vandenberg, 1983; Singer & Singer, 1976). For example, the play of autistic and psychotic children is characterized by nonsymbolic, fragmented, and repetitive actions (Gordon & Cowan, 1983; Rubin et al., 1983).

Many disturbed children, in spite of sometimes high intelligence, will play only as much younger children would (cf. Millar, 1968). A study by Barker, Dembo, and Lewin (1941/1976) provides evidence that normal children, when presented with a frustrating experience, play less constructively and at a more immature level. It is possible that experiences that involve anxiety or emotional stress for children, such as divorce and hospitalization, may elicit changes or regressions in children's normal play patterns.

In the one major study of the effect of divorce on children's play, Hetherington, Cox, and Cox (1979) followed two matched groups of preschoolers (one group with recently divorced parents, one group with intact families) over a two year period. Children from divorced families exhibited play patterns that were more fragmented and less cognitively and socially mature as compared to their counterparts from intact families. In particular, children from divorced families had fewer different characters involved in their stories, less frequently made different uses of the same object in play, played for shorter durations, and showed less diversity in either themes or affect in their play. For boys, but not for girls, these play patterns continued into the second year following the parents' divorce.

Another major stress experienced by many children is hospitalization. Burstein and Meichenbaum (1979) found a significantly greater amount of play disruption (i.e., time spent not playing while toys were available) during hospitalization as compared to before or after hospitalization. Play disruption represents an extreme stylistic and structural change in children's play as a result of high levels of anxiety. The concept of play disruption, introduced by Erikson, suggests that play will stop abruptly if anxiety becomes too great. That is, play can get out of hand and bring the feared stimulus too close to the child, thus triggering the child's anxiety. Gilmore (1966) presents evidence which suggests that increased levels of anxiety may lead to play disruption. Other instances of play disruption during the stressful experience of hospitalization have been reported anecdotally by

Peller (1954) and Tisza, Hurwitz, and Angoff (1970).

The Present Study

This review of the literature suggests that play is sensitive to the presence of anxiety, but certain basic assumptions still need to be tested. First, it is assumed that, for the same child, play involving an anxiety-arousing theme would differ from play about a neutral theme. Second, two children who differ in whether a theme elicits anxiety or not would show differences in their play. Third, it is assumed that the play about an anxiety-arousing theme is manageable and regarded more as "fun" than as "scary." The present study tested these assumptions and it sought to outline some ways in which children's play alters when it is used to express these fears.

The first methodological question was which fears to study. It is known from other research that young children have characteristic fears that change with age (Bauer, 1977; Bowlby, 1973; Jersild & Holmes, 1935; Jersild, Markey, & Jersild, 1933; Lapouse & Monk, 1959; Miller, Barrett, Hampe, & Noble, 1972). Many normal children, for example, think about monsters and ghosts, worry about doctors, anticipate threatening encounters with animals, and so on. These concerns are a characteristic part of development and typically lessen over time (Barrios, Hartmann, & Shigetomi, 1981; Bauer, 1977; Bowlby, 1973; Graziano, DeGiovanni, & Garcia, 1979; Jersild & Holmes, 1935; Jersild et al., 1933). The most extensive sources of data we have concerning the kinds of situations children fear and how these change with age, are from the work of Jersild and his colleagues in the 1930's. Despite some shortcomings in these studies, they remain the primary sources of information. Some of the major points do receive outside support, however, from both earlier (e.g., Hagman, 1932) and more recent work (e.g., Bauer, 1977; Lapouse & Monk, 1959; Miller, et al., 1972).

Jersild and Holmes (1935) obtained detailed reports over a 21-day period from parents and teachers for 136 children (ages one to five years) describing every occasion on which a child showed a fear. For children under two years of age, the most commonly reported fears included: noise, strange objects, persons, or situations, sudden unexpected movements, loss of support, and pain. Between the ages of two and five years, Jersild and Holmes noted a decline in fears of this type and an increase in fears with an imaginative character, such as: fear of the dark, or imaginary creatures, and of potential events (e.g., foreboding that an accident or injury *might* happen). In another study in which 400 children between the ages of five and twelve were interviewed privately (Jersild, Markey, & Jersild, 1933), fears with an imaginative component were also found to be common. Over 50% of the fears reported by children were judged to be fears of dangers which were fantastic or unreal (i.e., the feared events or objects were remote from the child's daily existence). Many of these fears involved supernatural creatures or dangers related to darkness and being alone. Roughly one third of children's fears at these ages involved concrete events such as fears of domestic animals, noises, and strange persons or situations, with fears of animals being the most prevalent.

The results showed that fears of animals and of darkness are prominent from the age of two or three years onward. A high incidence of both of these fears is reported in many studies (e.g., Bauer, 1977; Holmes, 1936; Lapouse & Monk, 1959; Miller, et al., 1972). In the study to be reported here, these two fears were therefore used to examine how play is used as a medium for expressing these concerns. The present study examined children's play as they were creating stories about various themes, some scary, such as the concerns above, others benign.

As an example of how children's play may reflect their concerns, suppose a child was afraid of the dark. A child who is concerned and preoccupied with a particular issue may play less constructively about that topic and at a less mature level than a child who is secure with that issue. In addition, the child who is afraid of the dark may be better able to engage in elaborate and highly developed pretend play when creating stories about relatively benign themes, but may experience more difficulty playing constructively when the story theme involves darkness or a fear of being in the dark. In both cases, (i.e., between- and within-subject comparisons) the play of the anxious child may be less organized and less imaginative. This increased difficulty in playing about an anxiety-arousing theme is also predicted to be reflected in avoidance of the topic. For example, children may require more time after a scary story is introduced before they can engage in play and they may be able to sustain the theme for only a brief amount of time. Similarly, increased anxiety and avoidance would be predicted to result in decreases in children's concentration or involvement in the story, perhaps demonstrated in part by lower levels of physical activity during play.

Method

Subjects

Forty-eight children (24 girls, 24 boys) from a preschool in northern California participated in this study. They ranged in age from 4-2 to 5-11 with a mean age of 4-11. Children were selected for this study as follows. A brief questionnaire was sent home to each of 99 parents of 4- and 5-year-olds at the preschool. This questionnaire was designed to gather preliminary information about common concerns in preschool children. Fifty-six parents responded and consented to be contacted by telephone to answer more detailed questions about their child's concerns. All 56 parents were interviewed by telephone.

The parents were asked to rate their child's level of fear of dogs and fear of the dark on a five-point scale, ranging from "not at all scared" to "extremely scared." These ratings were used to identify children who were concerned or anxious about such experiences. Children who were rated at or below the median score for both fears were placed in the group labelled "non-anxious." Children who were rated above the median score for one fear and at or below the median score for the other fear were assigned to one of the two

"anxious" groups. The mean rating of fear of dogs was 1.94 (SD = 1.14; median = 2), and children with ratings of three or more were considered "dog-anxious." The mean rating of fear of the dark was 2.21 (SD = 1.13; median = 2), and children with ratings of three or more were considered "dark-anxious." From the pool of 56 children whose parents were interviewed, 6 could not be included in the study because their parents rated them as being above the median score for both fear of dogs and fear of the dark. Of the remaining children, the first 48 were assigned to the appropriate group out of the three (i.e., "non-anxious," "dark-anxious," "dog-anxious") with the constraint that the groups be balanced for gender. Twenty-four children were in the "non-anxious" group and 12 children were in each of the "anxious" groups.

For children in the non-anxious group, the mean rating for fear of dogs was 1.38 (SD = .49) and the mean rating for fear of the dark was 1.54 (SD = .51). Children in the dark-anxious group had a mean rating for fear of the dark of 3.92 (SD = .67) and a mean rating for fear of dogs of 1.33 (SD = .49). Compared to children in the non-anxious or dog-anxious groups, dark-anxious children had significantly higher parental fear ratings for the dark, $F(2, 45) = 84.99$, $p < .001$. Children in the dog-anxious group had mean ratings of 3.67 (SD = .65) and 1.83 (SD = .39) for fear of dogs and fear of the dark, respectively. Children in this group had significantly higher parental fear ratings for dogs compared to children in the other two groups, $F(2, 45) = 83.09$, $p < .001$.

In addition to rating these "scary" situations, parents rated how fearful their child would be of several "benign" situations. These "benign" themes were incorporated in the stories introduced during the play sessions with children. Table 1 presents the mean ratings given by parents for all of the "benign" and "scary" situations introduced in the stories.

Insert Table 1 about here

The median rating for each of the situations corresponding to the "benign" stories was one on a five-point scale of fear intensity. Children in the non-anxious, dark-anxious, and dog-anxious groups did not differ significantly in the parents' ratings of fear for the four "benign" stories, F's $(2,45) < 1.34$, p's $> .05$.

Of the 48 children who participated in the study, 30 (16 girls, 14 boys) were judged by their parents to be fearful of something other than dogs or the dark. The number of other fears reported by parents did not differ across anxious and non-anxious children. Fourteen children in the non-anxious group were judged by their parents to be fearful of something other than dogs or the dark and 16 children in the dog-anxious and dark-anxious groups had other fears, as reported by parents. The intensity of these other fears mentioned by parents did not differ significantly across non-anxious, dark-anxious, and dog-anxious children, $F(2, 28) = .67$, $p > .05$. The most prevalent fears included issues around separation and loss (reported for 14 children), worries about imaginary creatures

such as ghosts and monsters (reported for six children) and concerns about insects and spiders (reported for five children). Over all the children, parents reported an average of one fear per child with a mean rating of 3.56 (SD = .92).

Materials and Experimental Setting

Children were invited to a playroom, a separate room located next to their classroom at the preschool. In the playroom, children had a selection of toys to use in their play. These toys included: seven felt hand puppets portraying various people (e.g., mother, father, girl, boy) and animals (e.g., a dog, a monster), a puppet-sized bed, a car, play food and dishes, birthday hats, cardboard building blocks, and a small battery-operated light. The toys were placed in a large, colorful toybox on a carpet in one corner of the room. A videocamera was positioned in the opposite corner and children were told that the experimenter would be making a movie of their play.

Procedure

Parent interviews. Only those children whose parents agreed to be interviewed by telephone were considered for inclusion in the study. To keep the experimenter blind to the children's conditions, all telephone interviews with parents were conducted by research assistants.

The telephone interview was a semi-structured interview in which parents were asked a series of questions about their child's fear of the dark, fear of dogs, and other fears, concerns or preoccupations that they had noticed in their child. Many questions dealt with specific situations such as the child's bedtime routine or how the child reacts when an unfamiliar dog approaches. Each parent was asked to rate the child's level of fear for each of the potentially scary situations, as well as for several typically benign situations. In addition, parents were queried as to the content of their child's pretend play activities.

Play sessions. Each child was approached in the classroom and asked to the playroom to play and make up stories for about 30-35 minutes. All children's play sessions were videorecorded. Following a brief free play period for children to adjust to the situation, the children were told that they could play with any of the toys in the room and that they should try to help create stories or put on plays about different topics suggested by the experimenter. For example, one theme was introduced as follows: "*Let's make up a story about this puppet* (experimenter picks up a puppet but does not place it on her hand). *See this girl/boy? This girl/boy is very, very hungry and wants something to eat. S/he is going to cook something in the kitchen. S/he is thinking about what s/he wants to cook. What happens next? Can you tell me a story about it?* (experimenter pushes puppet toward child)." Some of the topics that the experimenter suggested included benign themes popular in young children's play (Garvey, 1977): cooking, shopping, and taking a trip. Other themes were based on situations reflecting common concerns of preschoolers, namely a fear of being in the dark and anxiety about encountering a threatening animal. The complete script and themes are presented in Appendix A. If a child did not begin playing after the

initial introduction of a topic, the theme was repeated two more times to allow the child ample opportunity to play. If the child did not begin playing after three introductions, the experimenter presented the next story.

Six story themes were introduced during each session. Each play session began with the same "benign" theme: cooking. The other five stories (three "benign" themes and two "scary" themes) were presented in two different sequences. The sequences were arranged so that (1) the two "scary" topics did not follow one another and (2) a "benign" story always preceded and followed a "scary" story. Thus, the "scary" stories occupied the third and fifth positions, producing the following order: benign, benign, scary, benign, scary, benign. One group heard the themes introduced in the following order: cooking (benign1), shopping (benign2), dark (scary1), travelling (benign3), dog (scary2), birthday (benign4). For the other group, the themes occurred in the following order: benign1, benign4, scary2, benign3, scary1, benign2. Thus, the first "benign" story, cooking, served as a constant with which to compare the groups. Another feature of these two orders is that for half of the children the story about the dark would be the first "scary" theme introduced while for the other half of the children it would be the second "scary" theme suggested. This arrangement provides a way to contrast the two "scary" stories and to determine whether children's play about one "scary" theme might be influenced by the "scary" theme that preceded it.

Children were randomly assigned to one of the two presentation orders with the constraint that each group should include an equal number of "anxious" and "non-anxious" children and an equal number of girls and boys. For each story, children were allowed to play for approximately five minutes. If a child was reluctant to stop, the experimenter stated: "Tell me how this story will end" or "Let's finish this story and make up a different story."

At the end of the play session, children were asked questions about each of the story themes that had been introduced by the experimenter. For each suggested story topic, children were reminded of the gist and then asked two questions: "Do you think that story would be scary or fun for most kids?" and "When you made up that story, was it scary or fun for you?"

Coding of Play Sessions

Each child's videotaped play session was coded by three independent judges on a number of different measures. Many of these measures have been used successfully in previous research, while others were developed by the experimenter on the basis of pilot data. The various measures can be arranged into ten groups that can be labelled as follows: (1) the presence of characteristics that define pretend play; (2) duration of play; (3) maturity of play; (4) imaginativeness of play; (5) development of theme in play; (6) aggression and dominance in play; (7) activity levels during play; (8) avoidance of play; (9) concentration during play; and (10) affect during play. Each of the variables is briefly described below. Appendix B presents detailed summaries for all of the coding categories.

The presence of characteristics that define pretend play. Certain characteristics define what kinds of behaviors would be considered pretend play in this study. The principal features that many people use implicitly when judging whether or not a certain behavior is play are: positive affect, flexibility, and nonliterality (Smith & Vollstedt, 1985). A pretend play episode was defined as beginning when a child performed a nonliteral act after a story theme had been introduced. A behavior was considered nonliteral if it met one or more of the criteria described by Fein (1981): (a) familiar activities are performed in the absence of the necessary materials or usual social context (e.g., child pretends to sleep when it is not bedtime); (b) the activities are not carried out to their usual outcome (e.g., child pretends to, but does not sleep); (c) inanimate objects are treated as animate; (d) one object or gesture is substituted for another (e.g., a block becomes a lion in play); (e) the child performs an activity usually done by someone or something else (e.g., the child roars like a lion). Judges scored each of the six stories developed by every child for the presence or absence of positive affect and nonliterality. The flexibility of children's play was scored on a scale from zero (no behavioral flexibility) to three (high variation in behavior). Smith and Vollstedt (1985) reported that observers showed good agreement in judging the presence of positive affect, nonliterality, and flexibility in children's play, with the percentage of agreement ranging from 71% to 80%.

Duration of play. The latency (i.e., the time interval between the introduction of the story and the beginning of play) and the length of time each theme was sustained (i.e., the amount of time from the first nonliteral act to the end of the story) were recorded.

Maturity of play. Two seven-point scales were the primary means of assessing the level of sophistication demonstrated in children's play. The *constructiveness scale* (Barker, Dembo, & Lewin, 1941/1976; Clune, Paolella, & Foley, 1979) distinguishes variations in play ranging from simple activities with little structure (e.g., banging blocks together or examining and arranging materials) to elaborate and highly imaginative pretend play with much structure. Children were scored on the basis of the highest level shown during a play episode. Earlier studies documented high levels of reliability for this measure. Barker et al. (1941/1976) reported an overall reliability measure of .88 and Clune et al. (1979) reported an interrater reliability of .97.

The other scale used to measure the level of maturity of children's play differentiates among various pretense activities according to how children represent the self and others in play (Bretherton, 1984; Lucariello, 1987). This *self-other scale* attempts to capture children's developing ability to represent roles, first single roles and later several interacting roles (Bretherton, 1984). The first level in the depiction of self-other relations involves producing actions associated with one's own behavior, for example, pretending to sleep or to eat. The highest level of play on this continuum occurs when children can animate objects without actively participating in the plot (e.g., child assigns daddy role to one puppet, assigns child role to another puppet and has the two characters interact with each another). Lucariello (1987) reported an average of 89% agreement across observers for the self-other scale, along with other measures. As for the constructiveness scale, children were

scored for the highest level of self-other relations demonstrated during a play episode.

Imaginativeness of play. Other measures that were used to evaluate the quality of the children's play included those assessing imaginative features in pretend play. The general imaginativeness of children's play in each story episode was rated on a five-point scale (Singer, 1973). Each pretend play episode was also scored for the amount of transformed/substitute object use and imaginary object use (Lucariello, 1987). Transformed or substitute object use refers to children using actual and known objects as other objects in play (e.g., using a car to represent a spaceship). If children referred to imaginary objects and/or features of imaginary objects, such as a nonexistent but "delicious" birthday cake, this was scored under the category of imaginary object use. Lucariello (1987) reported good agreement for these measures, with no measure having less than 80% agreement across observers.

Development of theme in play. Children's play episodes were coded in terms of eight types of themes that might be developed in the pretend play. These themes included: aggression and threat, exploration and adventure, achievement, power and superiority, nurturance and caretaking, separation and loss, daily routines, and others (Hetherington et al., 1979). Hetherington et al. (1979) reported an average of 92% agreement for this and other measures. To some extent, each suggested story topic determined the theme, but there was still variability among children in their choice of thematic content. The degree of organization within each story and the number of characters included in the play were also scored. In addition, the presence or absence of a "happy ending" for each story was noted.

Aggression and dominance in play. The level of aggression demonstrated in each play episode was rated on a scale from zero (no aggressive acts) to three (many aggressive actions). In addition, it was noted how often the child was the "victim" of the aggressive play and how often someone else was the "victim." Another feature of children's play that was measured was dominance, or situations where the usual relationships of power were reversed (e.g., child sent parent character to bed without supper). Both Piaget (1962) and Freud (1920/1955), as well as other writers (e.g., Peller, 1952; Weisler & McCall, 1976), mention this wish for control over the environment, either inanimate or social, as being a powerful motivation for children. This measure counted the number of pretend play acts in which the player assumed a position of dominance.

Activity levels during play. The level of physical activity of children during each play episode was rated on a scale from one to three.

Avoidance of play. Various measures were developed to assess anxiety and/or avoidance in children across these play settings. Several of these items scored the presence of task-irrelevant behavior such as: frequently making comments about toys or other objects in the room, answering "I don't know" or " What happens next" repeatedly to the researcher's questions, ending the story early or abruptly, or refusing to play about the suggested topic and substituting a different theme (either a previous story topic or a newly created theme). In addition, another measure assessed the experimenter's level of

interaction with the child. For this variable, judges rated the amount of effort and coaxing involved on the part of the experimenter to get the child interested in the play.

Concentration during play. Each child's level of concentration during play was rated on a five-point scale ranging from high distractibility to intense absorption in one activity (Singer, 1973).

Affect during play. Children's affect during each play episode was scored in one of eleven affect categories (Hetherington et al., 1979). These categories included: happy, anxious, apathetic, unhappy, excited, and others. Hetherington et al. (1979) reported that reliability based on agreement averaged 92% for this and other measures.

Results

The basic question this study sought to address is how children's particular concerns or fears are mirrored in the structure and style of their play. To this end, this section will be organized as follows. First, it will compare the three groups of children as described by the parents' reports. Then, data will be presented from the play sessions for children in each of these groups. Finally, data from the post-session interviews with the children will be presented.

Parent Interviews

Behaviors associated with fears. During telephone interviews conducted with the parents of the children in this study, parents answered questions about their child's fear of the dark, fear of dogs, and other fears, concerns or preoccupations they had noticed in their child. Many questions posed to parents involved specific situations such as the child's bedtime routine or how the child reacts when an unfamiliar dog approaches. Parents were also asked about their child's pretend play activities and their ability to talk about their fears and concerns. Children's age was not related significantly to any of the behaviors discussed with parents. The only significant correlation found for gender was a greater likelihood that boys would express a fear of monsters, Pearson r (46) = .292, $p < .05$, two-tailed.

The level of children's fear of the dark was associated with an interesting constellation of behaviors, as reported by parents. The higher a child's fear of the dark, the *more* likely that child is afraid of monsters (Pearson r (46) = .381, $p < .01$, two-tailed), and involved in spontaneous play about the dark (Pearson r (46) = .452, $p < .01$, two-tailed). Children with high levels of fear about the dark were also *less* likely to talk about their fears with parents, Pearson r (46) = -.396, $p < .01$, two-tailed. Thus, according to the parents' report, children who fear the dark are likely to initiate play concerning the dark but not likely to verbalize the fear in talking to the parents. On the other hand, a fear of dogs did not correlate with spontaneous play concerning dogs, but the parents' report did indicate a disinclination to discuss the fear, Pearson r (46) = -.425, $p < .01$, two-tailed. Children whose parents reported their child had other significant fears were also less likely

to talk about their fears with their parents, Pearson r (46) = -.430, $p < .01$, two-tailed.

Data from Children's Play Sessions

Reliability of Measures

Each child's videotaped play session was coded by three independent judges. The ratings of each judge were correlated with those of the other judges for each measure separately. The interrater reliability coefficients ranged from $r = .71$ to $r = .99$ averaged .91 over all measures. Cohen's kappas were always significantly above chance levels of agreement.

The data showed no effects of age or general anxiety (dark- anxious and dog-anxious children combined versus non-anxious children), so these variables will not be discussed further in the following sections. The only reliable difference found for gender was that boys exhibited more aggressive play than girls across all stories, $F(1, 46) = 4.49$, $p < .05$.

Several coding measures were examined, but are not discussed below. The measure for dominant acts in children's play, along with the measure for self-directed aggression were not included because of their extremely low incidence in the judges' ratings. Most of the measures for avoidance of play also showed a low rate of occurrence. The one exception in this category was the number of task-irrelevant comments made by children, so this one measure was retained. The level of physical activity of the experimenter during the play sessions showed little or no variability across all stories and groups and thus was omitted from the analysis.

Quality of play scale. Across the coding categories, eight variables reflected the organization, imagination, constructiveness, development, and involvement shown in children's play. These variables are conceptually related and appeared to be good candidates for forming an overall measure of the quality or richness of children's play. The variables were intercorrelated; the Pearson r's ranged from .30 to .82, with a mean of .53. A principal components analysis of this correlation matrix showed that the first unrotated factor accounted for the majority of the explained variance (33.7%), and all the variables loaded positively on this factor (ranging from .14 to .82, mean = .56).

Each variable correlated significantly with at least five of the other measures, and together they formed a "play quality scale." The measures that form the play quality scale are: self-other scale, constructiveness scale, number of transformed/substitute objects, imaginativeness, organization, concentration, number of characters, and level of child's activity. Items comprising each of these measures were converted to z-scores and then averaged to yield an overall quality of play scale score. Reliability for this newly formed play scale was high; Cronbach's alphas for each of the stories ranged from .84 to .89, with a combined Cronbach's alpha across all stories of .95.

Other play measures. Other variables used to examine children's play also showed good reliability. Inter-rater reliability for the duration of play measures (latency and length of play) was .99. For the variables measuring the number of task-irrelevant comments made by children and the number of imaginary objects included in children's play, inter-rater reliability was also very high (.97 and .96, respectively). Reliabilities for flexibility in play and the level of the experimenter's interaction with children were somewhat lower (.79 and .73, respectively). For the remaining measures (positive affect, nonliterality, theme content, affect during play, happy ending for story), the percentage of agreement among raters ranged from 85% to 100%.

Principal Findings

Initial comparability. Children in the non-anxious, dark-anxious, and dog-anxious groups were compared on the cooking story, the first story introduced to all children during the play session. No significant differences among the groups emerged for any of the variables examined (t's (46) < 2.00, p's > .05), thus supporting the assumption that the children in these three groups entered the play session with equivalent levels of play skills.

Order effects. Over all children, there were indications that the nature of children's play changed as the play session progressed. Children's play about the four benign stories was examined for changes in play among benign stories introduced early in the play session and benign stories introduced later in the play session. Children had been assigned to one of two presentation orders. For all children, play about benign themes later in the play session yielded higher scores on the play quality scale than play about benign themes earlier in the session, t's (23) > 2.28, p's < .01. Children also included more imaginary objects in their play as the session progressed, t's (23) > -2.10, p's < .05. This "practice effect" is attributed to the children's increased familiarity with the task demands and reduced self-consciousness through the session.

The play of children in both presentation order groups was also analyzed by story theme. For the shopping story, children who played about this theme later in the play session had higher scores on the play quality scale (mean = 1.96) than children who played about this theme earlier in the session (mean = -2.22), t (46) = -2.51, p < .05, two-tailed. Children who played about the birthday party theme later in the session included more happy endings in their stories (Mann-Whitney U test, p < .01), and showed less avoidance of play, as measured by the number of task-irrelevant comments made (t (46) = 2.19, p < .05, two-tailed). For the story about the dark, children who heard this theme later in the session tended to show greater flexibility in their play behavior (mean = 1.60), t (46) = -2.07, p < .05, two-tailed, compared to children who heard the theme earlier in the session (mean = 1.19).

Content effects. Repeated measures analyses of variance were performed across the six stories for all measures to examine whether the specific content of some stories appeared to influence children's play. For those factors that did not satisfy sphericity assumptions, multivariate rather than univariate models were used. In cases with severe

violations of the sphericity assumption (Greenhouse-Geissler epsilon less than .75), multivariate tests provide more valid Type I error rates and better statistical power (see Hertzog & Rovine, 1985; Winer, 1971). All differences between means that are discussed in the next sections were significant at or beyond $p < .01$ level (modified Bonferonni adjustment, Hertzog & Rovine, 1985) using post-hoc paired t-tests, two-tailed. Correlations were also performed on selected variables and those correlations reported were significant at $p < .05$.

Across all children, there was a reliable difference for the number of imaginary objects included in play, $F(5, 43) = 2.94$, $p < .05$. The story about going on a trip drew the largest number of imaginary objects (mean = .42) whereas the story about a birthday party drew the least (mean = .14). There was a significant difference found for the length of time children played about various themes, $F(5, 43) = 2.94$, $p < .05$. Overall, children spent the most time playing about a birthday party (mean = 208.54) and the least time playing about encountering a dog (mean = 154.12). Significant differences also emerged for aggression across the stories, $F(5, 43) = 3.25$, $p < .05$. Children showed the lowest level of aggression while playing about the first story, the cooking theme (mean = .10). Most children showed higher levels of aggression while creating stories about the dark, dogs, or a birthday party (means = .34, .48, .39 respectively).

Play of dog-anxious children. The play of children who were fearful of dogs confirmed several of the predictions of this study. Children who were anxious about dogs and children who were not anxious about dogs (dark-anxious and non-anxious groups combined) performed similarly on all stories but the one about encountering a dog. Table 2 presents the means for children who were anxious about dogs and children who were not anxious about dogs for each of the measures examined. For the dog story, children who were anxious about dogs took longer to begin play on the story (mean = 34.88) compared to other children (mean = 11.11), as confirmed by a reliable group x story interaction, $F(5, 42) = 2.65$, $p < .05$.

Insert Table 2 about here

Children who were anxious about dogs showed a significantly lower quality of play for the dog story (mean = -4.05) compared to other children (mean = 1.28), as shown by a significant group x story interaction, $F(5, 225) = 3.04$, $p < .01$.

Additional analyses were performed on the measures comprising the play quality scale to determine which factors contributed to the lower play quality score for dog-anxious children. Significant group x story interactions were found for three of the variables in the play quality scale: the self-other scale, the constructiveness scale, and the level of the child's physical activity during play. For the dog story, dog-anxious children received lower ratings on the self-other and constructiveness scales (4.09 and 3.17, respectively) compared to other children (4.81 and 4.62, respectively). A mean score around three on the constructiveness scale indicates that dog-anxious children were spending much

of their time investigating, examining, and arranging materials rather than using the materials in more developed pretend play activities. On the other hand, non-anxious children with a mean score of 4.62 on the constructiveness scale were using the toys in appropriate play activities at a more developed level of fantasy play. The scores of the dog-anxious and non-anxious groups on the self-other scale also show a similar pattern. Non-anxious children were more likely to become vicarious actors for puppets in play and to pretend that the puppets could act on their own, thus demonstrating a well-developed level of pretend play. Dog-anxious children, however, were less likely to pretend that puppets could act or speak on their own, but rather made statements about the puppets such as "This boy is going to run away." Thus, dog-anxious children were less able to use pretend characters at a level as sophisticated as the non-anxious children during play about the dog story. Children who were anxious about dogs also showed lower levels of physical activity during play about the dog story (1.16) compared to other children who were not anxious about dogs (1.90). For the story about going on a trip (which followed the dog story for half of the children), dog-anxious children also demonstrated lower levels of physical activity during play.

For play about the dog story, and only this story, there were several significant correlations between the level of children's fear about dogs and their performance on several measures. Higher levels of fear about dogs correlated at $p < .05$ with longer latency times (Pearson r (46) = .36), lower play quality scale scores (Pearson r (46) = -.28), lower flexibility in play (Pearson r (46) = -.29), and greater coaxing from the experimenter to encourage children to participate in the play (Pearson r (46) = .28).

Observing dog-anxious children in their play about this anxiety-arousing theme, they appeared much more unsure of themselves and how to proceed in their play as compared to other children. Their initial reluctance to begin play seemed to carry over into the play itself, thus drawing more coaxing and encouragement from the experimenter. These children often developed a story that revolved around the puppet character playing safely inside its house with parents or friends after it had run away from the threatening dog. In general, these children conveyed a sense of helplessness through their low physical activity, their regressed quality of play, and their frequent inability to confront the anxiety-arousing theme directly in their play.

Despite these subjective observations, there were few clear signs of play disruption in children who were anxious about dogs. Most of the children in this group engaged in pretend play readily (i.e., demonstrated the features of positive affect, nonliterality, and flexibility) for each of the story themes. Only one girl in the dog-anxious group showed evidence of play disruption during play about the dog story and subsequent to this play. This child refused to play when the dog story (scary1) was introduced. She also refused to engage in pretend play for the next two stories (benign3, scary2), but was able to make up a story for the last theme (benign4).

Play of dark-anxious children. Table 3 presents the means for children who were anxious about the dark and children who were not anxious about the dark for each of the measures examined.

Insert Table 3 about here

In contrast to the results found for dog-anxious children, dark-anxious children did not display a significantly lower quality of play in the story relevant to their fear. Although the effect was in the predicted direction, it did not reach significance, t (46) = .31, p = .78. Similarly, the latency measure showed the predicted increase for dark-anxious children during play about the dark, but the difference was not reliable, t (46) = -.72, p = .34.

There was a main effect for group, $F(1, 46) = 6.57$, $p < .01$, with dark-anxious children showing more aggression in their play across all stories (mean = .51) than children in the dog-anxious and non-anxious groups (mean = .25). There was also a group x story interaction for aggression, $F(5, 42) = 4.31$, $p < .01$, with dark-anxious children demonstrating the most aggression when playing about being in the dark. There were no significant correlations between level of fear of the dark and any of the play measures for the story about the dark.

In general, dark-anxious children appeared excited and involved when playing about this anxiety-arousing theme and they frequently relished creating and destroying imaginary creatures that lurked in the darkness. They took an active role in play about this story and showed little of the reluctance or avoidance demonstrated by dog-anxious children when playing about the dog story.

Only one boy in the dark-anxious group demonstrated play disruption; he did not play about the dark story (scary2) or the following story (benign4). Most other children in this group showed the features characteristic of pretend play, namely positive affect, nonliterality, and flexibility, across all six stories.

For children in the dark-anxious group, there was evidence that hearing a previous "scary" theme influenced their later performance about a different "scary" theme. Children in this group who heard the story about the dark as the first "scary" story played longer about the theme (t (10) = 2.36, $p < .05$, two-tailed) and had higher play quality scores (t (10) = 2.84, $p < .05$, two-tailed) compared to dark-anxious children who heard the dark story introduced after the other "scary" theme. No reliable differences for the order of the "scary" stories were found for children in the dog-anxious group.

Post-session Interviews with Children

At the end of the play session, each child was asked two questions about each of the six story themes that had been introduced by the experimenter during the play session. Children were reminded of the gist of each story and then were asked to judge whether the story was scary or fun for them and whether the story would be scary or fun for most children.

For the four "benign" stories, the majority of the children answered that the stories were fun for them and that they would be fun for most children. For the two "scary" stories, most children reported that they had fun playing about the topics. Many children, however, acknowledged that the stories about being in the dark or encountering a large dog could be frightening for other children. Tables 4 and 5 present the number of children who answered "scary," "fun," or "both scary and fun" to the two questions posed for each of the six story themes.

Insert Tables 4 and 5 about here

Chi-square analyses revealed no significant differences between non-anxious children and anxious children in their responses for the four "benign" stories; anxious and non-anxious children both stated more often that these stories would be fun for themselves and for most children. For the two "scary" stories, anxious and non-anxious children were equally likely to reply that they had fun playing about the dark, $\chi^2(2, N = 48) = 1.62$, $p > .05$, and that they had fun playing about a dog, $\chi^2(2, N = 48) = 1.14$, $p > .05$. There was a also a trend for children who were afraid of the dark to answer that they had fun playing about the dark, Pearson $r\ (46) = -.268$, $p = .08$, two-tailed. When scored for whether children said that any story might be scary, anxious and non-anxious children still did not differ in their responses to the question concerning themselves, $\chi^2(2, N = 48) = 4.83$, $p > .05$.

For the question concerning other children's reaction to the stories, non-anxious children tended to state that playing about the dark might be *scary* for many other children, but anxious children tended to answer that that playing about the dark would be *fun* for most children, $\chi^2(2, N = 48) = 8.80$, $p < .05$. For the story about encountering a large dog, non-anxious children were more likely to answer that the story might be *scary* for some children; children in the dog-anxious or dark-anxious groups tended to reply that the story would be *fun* for most children, $\chi^2(2, N = 48) = 6.40$, $p < .05$.

When anxious children were able to explain their answers to these questions, they tended to focus on their own experience during the play session rather than imagining how other children might react. For example, children in the two anxious groups tended to state that the two "scary" stories would be fun for other children because "she stayed up

all night," or "the girl and the dog played together," or "you can turn on the light." Many of the non-anxious children were able to state that the two "scary" stories might be frightening for other children because "they might be afraid of the dark," or "they're little kids, like three years old," or "some kids don't like to get sniffed [by dogs] ...they run and cry."

Discussion

This work set out to examine how children use play to express their concerns and fears. It was hypothesized that children's particular concerns or fears would be mirrored through changes in the structure and style of their play. More precisely, it was hypothesized that children who were rated by their parents as being concerned and preoccupied with a specific topic would play less constructively about the topic and at a less mature level than children who were secure with that issue. This effect was expected to be observed both within and between children. That is, a child with a fear of dogs was expected to be better able to engage in elaborate and highly developed pretend play (i.e., play constructively) when creating stories about relatively benign themes, but experience difficulty playing constructively when the story theme involves dogs or being near dogs. In addition, these children were expected to be less constructive in playing about dogs than non-anxious children. Other differences were also expected in the play of anxious children. For example, anxious children were expected to require more time after a scary story was introduced before they could begin engaging in play. Other changes, such as decreases in organization, imaginativeness, and physical activity level were also hypothesized when children's play touched on personal concerns or fears.

This study focused on two fears that are common in normally-developing preschoolers: fear of dogs and fear of the dark. The play of children who were anxious about dogs was consistent with several of the predictions of this study. On the other hand, the play of children who were anxious about the dark did not match this pattern, thus raising many intriguing questions. I shall begin by discussing the findings from the play of children who were fearful of dogs. I shall then examine the results for the play of children who were anxious about the dark and present some speculations as to why the play of children in these two groups differed in this study.

Play of Dog-Anxious Children

The play of children who were anxious about dogs provided support for each of the three principal hypotheses tested in this study. First, the data showed that dog-anxious children differed significantly in their play from children who were not dog-anxious. When the anxiety-arousing theme about dogs was introduced, the play of children who were anxious about dogs differed in several aspects from the play of children who were not anxious about dogs. Anxious children required more time after the scary story was introduced before they engaged in play. This initial reluctance of dog-anxious children to play about the anxiety-arousing theme was followed by a lower quality of play about the theme. Specifically, anxious children demonstrated decreases in the overall maturity of their play

(as shown by declines in scores for both the constructiveness and self-other scales) and in their physical activity during play about the anxiety-arousing theme. Dog-anxious children tended to spend more time examining and arranging materials rather than using the materials in well-developed pretend play activities. These children were also less able to use pretend characters at a level as sophisticated as the non-anxious children during play about the dog story. In addition, dog-anxious children showed less flexibility in their play about the dog story and they required more coaxing and persuasion from the experimenter to begin play about this topic.

The data were also consistent with a second hypothesis tested in this study, namely, that for the same child, play involving an anxiety-arousing theme differs from play involving a neutral theme. Children who were anxious about dogs were able to engage in well-developed pretend play when creating stories about "benign" themes. No differences were found between the play of dog-anxious and non-anxious children for any of the story themes except the story involving the dog. In addition, no differences were found between anxious children who heard the dog story introduced as the first "scary" theme or children who heard this story introduced as the second "scary" theme. The differences between dog-anxious and non-anxious children in their play about the dog story persisted even as children became more familiar with the task demands and less self-conscious during the session.

A third hypothesis tested in this study was that play about an anxiety-arousing theme can be managed by children and described as "fun." This assumption also received support from children who were anxious about dogs. Play about the feared situation could be managed by children to a certain extent in that only one child in the dog-anxious group showed clear signs of play disruption when the dog story was presented. Whether or not these children actually had fun while playing about dogs is less clear, however. In post-session interviews with children, most anxious and non-anxious children reported that they had fun making up a story about a dog. Dog-anxious children also tended to state that the dog story would be fun for most children, while non-anxious children were more likely to acknowledge that the story could be frightening for some children. It is possible that anxious children's responses to the post-session interview questions reflected the operation of the defense mechanism of denial. In denial, children seek to protect themselves from the disruptive effects of anxiety by withdrawing attention from the anxiety-arousing issue. Thus, by stating that they and most children would find playing about dogs to be fun, these children might partly nullify the anxiety this topic arouses in themselves.

Denial, thought to be a primitive defense mechanism, has been hypothesized to be commonly used by children under five years of age (Vaillant, 1977). Cramer (1987) examined the development of defense mechanisms in young children and adolescents and found that denial was most frequently used by preschoolers. In this study, Cramer (1987) scored children's responses to Thematic Apperception Test cards for the presence of themes that illustrated the use of various defense mechanisms. For the mechanism of denial, some of these categories included: statements of negation, overly maximizing the positive or minimizing the negative, and unexpected optimism or positiveness. In future work, it

might be interesting to apply a similar scoring procedure to children's responses to post-session interview questions such as those used in the present study to further explore children's use of denial in these situations. A more detailed scale of children's affect during the play sessions might also yield useful information as to whether anxious children do indeed experience play about anxiety-arousing themes as "fun."

Play of Dark-Anxious Children

In contrast to the findings discussed for children who were afraid of dogs, the play of children who were afraid of the dark did not support two of the three principal hypotheses examined in this study. The primary difference found between the play of dark-anxious children and the play of non-anxious children was that dark-anxious children exhibited more aggression in their play across all stories. Dark-anxious children demonstrated the most aggression when playing about the anxiety-arousing theme of the dark. These results provide some support for the predictions that (1) within children, play involving an anxiety-arousing theme will differ from play about a neutral theme, and (2) between children, differences in whether a theme elicits anxiety or not will be reflected in differences in their play. The data from the play of dog-anxious children, however, more clearly and strongly supported these predictions.

As for children who were anxious about dogs, data from dark-anxious children also supported the hypothesis that play about an anxiety-arousing theme is manageable. Only one child in the dark-anxious group demonstrated play disruption when the dark story was presented. Most dark-anxious and non-anxious children stated that they had fun making up a story about being in the dark. Non-anxious children tended to state that a story about being in the dark could be scary for some children, but dark-anxious children tended to answer that this kind of story would be fun for most children. Again, these responses could be reflecting the defense mechanism of denial. Thus, it is unclear to what extent dark-anxious children did experience play about the dark as "fun."

Comparing Dog-Anxious and Dark-Anxious Children

Children who were anxious about dogs played less constructively about that topic and at a less mature level than children who were not anxious about dogs. Coupled with this regressed quality of play, these children were less active physically during play about dogs and they frequently avoided confronting the anxiety-arousing theme directly in play. Children who were anxious about the dark, however, were able to engage in well-developed pretend play both when creating stories about relatively benign themes and when playing about a story theme that involved the dark. Dark-anxious children often appeared excited and involved when playing about this anxiety-arousing theme and they showed little of the reluctance or avoidance demonstrated by dog-anxious children during play about the dog story. It is possible that the differences in the play patterns of children in these two groups may be related to the nature of their fears.

Parents reported that all fearful children (i.e., fearful of dogs, darkness, or other issues) showed a disinclination to talk about their fears. Unlike other fearful children, however, parents reported that children who were afraid of the dark often included themes of being in the dark in their spontaneous play. Children who were fearful of the dark were also likely to be fearful of monsters and other imaginary creatures, as reported by parents. Darkness is a theme that children encounter often in reality. The theme may also be encountered often in imaginary play, given the data from parents' reports as well as the large fantasy component that concerns about imaginary creatures may contribute to this fear.

Many interesting examples of children's play about darkness and the imaginary creatures that might be lurking in the dark were provided by parents. For example, one girl who was afraid of the dark talked about seeing monsters, a man with green hair and a long black coat, and "mean bean bunnies" in her room at night. Her mother reported that these characters appeared often in her pretend play. Another girl who was afraid of the dark also included monsters in her pretend play, but seemed to show a growing understanding that these creatures existed only in her imagination. As related by her mother: "Once, very frightened, she called her father into the bathroom. She told him: "I was on the toilet and in my imagination I asked *'Is anybody there?'* and in my imagination someone answered *'Yes!'*."

Parents provided no examples of play involving dogs or being near dogs for children who were anxious about this topic. They did give many detailed descriptions as to how anxious children reacted when they encountered a dog. The following example is typical of many parents' accounts: "From age three, she was very afraid of dogs we would meet while on walks or at the park. She would run to me and immediately want to be picked up. She would start to cry and bury her head into my shoulder if the dog would come very close, or jump up on me."

Children who are afraid of dogs are not likely to be in contact with dogs every day in reality. When they do encounter a dog, they try to avoid the situation and seek protection from an adult. On the other hand, children who are afraid of the dark encounter their feared situation every night. Although they may also seek protection with an adult, the darkness and its imaginary creatures cannot be as easily avoided, even with an adult nearby. Thus, it seems likely that children who are afraid of the dark encounter their feared situation often in reality and in fantasy, while children who are afraid of dogs do not encounter their feared situation as frequently in their external or internal worlds. Because dark-anxious children may have confronted the theme more often, whether in reality, in fantasy, or in both, it may be easier or less threatening for them to engage in play about this theme. The aggression that was a large component of dark-anxious children's play might be construed as an attempt to protect themselves from their unseen dangers. Because dog-anxious children may have confronted situations with dogs less frequently, it may be more difficult or threatening for them to play about this topic. The lower maturity of their play about this anxiety-arousing theme could be interpreted as reflecting their sense of an inability to protect themselves from this danger.

It should also be noted that some subtle differences in the degree of exposure to children's feared situations occurred during the play sessions. For play about dogs, a dog puppet was shown to children. The story about the dark, however, only suggested darkness and did not provide any actual darkness. The presence of a dog puppet could make the play about dogs seem more realistic and perhaps more threatening to dog-anxious children. It might be useful in future work to investigate this possibility further either by removing the dog puppet from the toys available to children or by creating a somewhat dark environment in a tent or small playhouse.

Speculations about the opportunities available to dog-anxious and dark-anxious children for exposure to their feared situations also have implications for the strength and course of these two fears. If dog-anxious children do tend to have less exposure to their feared situation compared to dark-anxious children, then one would expect a fear of dogs to remain stronger than a fear of darkness over time in some children. Although the intensity of the two fears was rated as equal for children in this study, previous research suggests that these two fears may go on to follow different developmental courses. Fears of darkness tend to show a high childhood incidence with a rapidly declining prevalence across age, thus suggesting these fears are relatively short in duration (Agras, Sylvester, & Oliveau, 1969). Fears of animals also show a high incidence in childhood, but with a slowly declining prevalence, thus suggesting a longer course (Agras, et al., 1969). Although Agras et al. (1969) also report that the fears of adult phobics typically do not begin in childhood, data from Marks and Gelder (1966) suggest that specific animal phobias may be an exception to this generalization.

In addition to exposure to the feared stimulus, another factor to consider is the degree to which children might be able to exert control over the feared stimulus. For children in this study, imaginary creatures appeared to constitute a large part of fear of the dark. These imaginary creatures can be created and destroyed by the child at will, thus giving the child much control over the feared situation. Previous experience in fantasy play in exerting control over imaginary monsters may have made play about the dark easier and less threatening for dark-anxious children in this study. Unlike monsters hiding in a closet, dogs exist in reality and thus may offer fewer opportunities for children to exert such complete control over them. This factor, in combination with less exposure to dogs, may have contributed to dog-anxious children's greater reluctance and difficulty in play about their feared situation.

Active control has also been argued to be crucial in helping children to master and overcome distressing events (e.g., Axline, 1969; Erikson, 1963,1972; Freud, 1920/1955). In this study, play was under the control of children, in that they decided how to set the scene, who became various characters in the story, what events would be enacted, what the script would be, and so on. One could view this type of playing with fear as a process of desensitization. Play provides exposure to anxiety-eliciting stimuli, which is an important part of desensitization and other fear reduction methods (e.g., Hagman, 1932; Hatzenbuehler & Schroeder, 1978; Holmes, 1936; Jersild & Holmes, 1935, 1936; Jones,

1924a, 1924b; Leitenberg & Callahan, 1973; Shenlow, Bondy, & Nelson, 1983). Not only does play provide exposure to the feared situation, but it also allows children to fragment and repeat themes in a setting free of many real-world consequences. These unique features of play have been noted by other researchers (cf. Milos & Reiss, 1982). These speculations engender several intriguing questions for future study. For example, how does play change across successive play sessions? Would children increase the dangerousness of the play over time? How does the dimension of active versus passive involvement in play affect a process of desensitization? It might be interesting to examine whether it would be more successful in a play therapy situation to use a script provided by the therapist or to use a script created by the child. Similarly, would it be more successful to assign a given role to the child or to allow the child to pick a role? Future research into these anxiety-reducing aspects of play would have important implications for the use of play in therapy with children.

A tension exists, however, between hypotheses about how play may reduce children's anxiety and the predictions of this study about how play may express children's anxiety. The present research predicted that children would demonstrate less mature play when the theme touched on personal concerns or fears. Data from the play of dog-anxious children were consistent with these hypotheses about the anxiety-revealing aspects of play. How then, would less mature play enable children to achieve a sense of mastery and thus reduce their anxiety about these issues? Some clues to this puzzle might be gained from examining the differences in the play patterns of dog-anxious and dark-anxious children from another perspective.

Let us consider further the basic nature of these two fears. As argued previously, differences in the play patterns of these two groups could result from differences in the amount and kind of exposure to the feared stimulus, as well as the amount of control children might be able to exert over the feared stimulus. One can also view a fear of dogs as being an external conflict; the child is fearful of a concrete object in the real world. Fear of the dark, however, represents a more internal conflict. For many of the children in this study, darkness in and of itself was not feared, but rather monsters and imaginary creatures formed the focus of this fear. One could interpret darkness as being the setting in which children projected their internal wishes and conflicts on to others, in this case imaginary creatures. These internal conflicts may revolve around aggression along with concerns about anticipated punishment for these aggressive wishes. The level of aggression shown in the play of dark-anxious children fits well with the concept of projection. Previous research (Cramer, 1987) identified the following categories as illustrative of projection: attribution of hostile feelings or intentions to a character, concern for protection from external threat, themes of pursuit, entrapment, and escape, and apprehensiveness of death, injury, or assault. These categories closely resemble the flavor of the well-developed but aggressive play of dark-anxious children in the present study.

Thus, for children coping with more internal conflicts, play provides a good medium for expressing these concerns, perhaps in part through projection. Play in turn may also provide an ideal vehicle for children to use to achieve a sense of mastery and thus resolve

these internal conflicts. For children with clearer external conflicts, such as children who are fearful of dogs, play also serves as an expressive medium, but in a different fashion. This group of children would be expected to regress in play about the fearful stimulus, perhaps due in part to some of the arguments concerning exposure and control discussed previously. Children concerned about external conflicts may require more direct, structured contact with the feared stimulus in order to reduce anxiety. Thus, behavioral treatments or structured play incorporating gradual contact with the feared stimulus may be most effective in reducing fears focused on external conflicts.

Conclusions

Children's play is widely used in many applied settings, typically with the implicit assumption that children use play as a medium for expressing and reducing anxiety. Unfortunately, there has been little previous research that examines these basic assumptions about the function of children's play in such applications. The present study examined the hypothesis that play provides an opportunity for children to express everyday fears and concerns. The data were consistent with the overall assumption that the structure and style of children's play varies according to children's anxiety. These findings also suggest that the nature of children's fears may have an important role in how play changes to express fears.

Past research that has examined the anxiety-revealing aspects of children's play focused on experiences such as divorce and hospitalization and the changes these experiences elicited in children's play patterns. In general, the data from the present study for children who were fearful of dogs are consistent with the findings of this previous research. Several researchers have observed instances of play disruption during the stressful experience of hospitalization (e.g., Burstein & Meichenbaum, 1979; Peller, 1954; Tizza, Hurwitz, and Angoff, 1970). Some examples of play disruption were also observed in anxious children in the present study, but play about anxiety-arousing themes was manageable by most anxious children. Whether or not anxious children experienced this play as fun, however, is not addressed clearly by these data. Although most anxious children tended to state that they had fun making up stories about anxiety-arousing themes, these responses could be reflecting the defense mechanism of denial. Some children, however, may have experienced play about scary themes as fun. The degree of involvement and development shown in the play of dark-anxious children about the dark suggests that they may have regarded the play as fun. Just as riding a roller coaster or telling ghost stories in the dark can be fun for many people, some children may enjoy the excitement and relative safety of "courting danger" by playing with fear under benign circumstances. If children can have fun while playing with a feared topic, and also achieve a sense of mastery from the activity, then play would appear to be an ideal therapeutic vehicle for reducing anxiety.

Although the possible anxiety-reducing effects of play could not be examined directly within the framework of the present study, the findings from this work may provide some hints as to how adults might help "improve" children's play. By focusing on the process of play from a structural standpoint, some means for enhancing play in children

may be uncovered. Helping children develop better play skills might result in helping children cope with distressful experiences, if only through providing children with alternative opportunities for practicing new kinds of behaviors while they are playing with fear.

Footnote

1. It should be noted that in comparisons between (a) "dog-anxious" and "non-anxious" children and (b) "dark-anxious" and "non-anxious" children that the non-anxious groups are not identical. In each case, the non-anxious comparison group consists of 36 children: 24 children who were rated below the median for both fear of dogs and fear of the dark along with 12 children who were rated below the median on one of these fears. Thus, the non-anxious comparison group for dog-anxious children would include all 36 children who were rated as below the median for fear of dogs: 24 children who were not anxious about either dogs or the dark and 12 children who were anxious about the dark, but not anxious about dogs. The results are unchanged when each anxious group is compared against a non-anxious group consisting only of those 24 children who were rated below the median for both fears.

REFERENCES

Agras, S., Sylvester, D., & Oliveau, D. (1969). The epidemiology of common fears and phobias. *Comprehensive Psychiatry, 10(2)*, 151-156.

Axline, V. (1969). *Play therapy*. New York: Ballantine Books.

Barker, R.G., Dembo, T., & Lewin, K. (1976). Frustration and regression: An experiment with young children. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 521-527). New York: Basic Books. (Original work published 1941)

Barnett, L.A. (1984). Young children's resolution of distress through play. *Journal of Child Psychology and Psychiatry, 25(3)*, 477-483.

Barnett, L.A., & Storm, B. (1981). Play, pleasure, and pain: The reduction of anxiety through play. *Leisure Sciences, 4(2)*, 161-175.

Barrios, B.A., Hartmann, D.P., & Shigetomi, C. (1981). Fears and anxieties in children. In E.J. Mash & L.G. Terdal (Eds.), *Behavioral assessment of childhood disorders* (pp. 259-304). New York: Guildford Press.

Bauer, D.H. (1977). An exploratory study of developmental changes in children's fears. *Annual Progress in Child Psychiatry and Child Development, 10*, 141-148.

Behar, D., & Rapoport, J. (1983). Play observation and psychiatric diagnosis. In C.E. Schaefer & K.J. O'Connor (Eds.), *Handbook of play therapy* (pp. 193-199). New York: John Wiley.

Bowlby, J. (1973). *Attachment and loss: Vol. II. Separation, anxiety and anger*. New York: Basic Books.

Bretherton, I. (1984). Representing the social world in symbolic play: Reality and fantasy. In I. Bretherton (Ed.), *Symbolic play: The development of social understanding* (pp. 3-41). San Francisco: Academic Press.

Burstein, S., & Meichenbaum, D. (1979). The work of worrying in children undergoing surgery. *Journal of Abnormal Child Psychology, 7(2)*, 121-132.

Cassell, S. (1965). Effect of brief puppet therapy upon the emotional responses of children undergoing cardiac catheterization. *Journal of Consulting Psychology, 29(1)*, 1-8.

Clune, C., Paolella, J.M., & Foley, J.M. (1979). Free-play behavior of atypical children: An approach to assessment. *Journal of Autism and Developmental Disorders, 9(1),* 61-72.

Cramer, P. (1987). The development of defense mechanisms. *Journal of Personality, 55(4),* 597-614.

Erikson, E. (1963). *Childhood and society* (2nd ed.). New York: W.W. Norton.

Erikson, E. (1972). Play and actuality. In M.W. Piers (Ed.), *Play and development* (pp. 127-167). New York: W.W. Norton.

Fein, G.G. (1981). Pretend play in childhood: An integrative review. *Child Development, 52,* 1095-1118.

Freud, A. (1928). *Introduction to the techniques of child analysis.* Washington, D.C.: Nervous and Mental Disease Publishing Co.

Freud, A. (1965). *Normality and pathology in childhood.* New York: International Universities Press.

Freud, S. (1955). Analysis of a phobia in a five-year-old boy. In J. Strachey (Ed. and Trans.), *The standard edition of the complete works of Sigmund Freud* (Vol. 10, pp. 5-149). London: Hogarth Press. (Original work published 1909)

Freud, S. (1955). Beyond the pleasure principle. In J. Strachey (Ed. and Trans.), *The standard edition of the complete works of Sigmund Freud* (Vol. 18, pp. 7-64). London: Hogarth Press. (Original work published 1920)

Garvey, C. (1977). *Play.* Cambridge, MA: Harvard University Press.

Gilmore, J.B. (1966). The role of anxiety and cognitive factors in children's play behavior. *Child Development, 37,* 397-416.

Gordon, D., & Cowan, P. (1983). A Piagetian approach to psychopathology: Scheme differences in children's play. Paper presented at the annual meeting of the American Psychological Association, Anaheim, CA.

Graziano, A.M., De Giovanni, I.S., & Garcia, K.A. (1979). Behavioral treatment of children's fears: A review. *Psychological Bulletin, 86(4),* 804-830.

Hagman, E.R. (1932). A study of fears of children pre-school age. *Journal of Experimental Education, 1,* 110-130.

Hatzenbuehler, L.C. & Schroeder, H.C. (1978). Desensitization procedures in the treatment of childhood disorders. *Psychological Bulletin, 85(4)*, 831-844.

Haworth, M.R., & Menolascino, F.J. (1967). Video-tape observations of disturbed young children. *Journal of Clinical Psychology, 23*, 135-140.

Hertzog, C., & Rovine, M. (1985). Repeated-measures analysis of variance in developmental research: Selected issues. *Child Development, 56*, 787-809.

Hetherington, E.M., Cox, M., & Cox, R. (1979). Play and social interaction in children following divorce. *Journal of Social Issues, 35(4)*, 26-49.

Holmes, F.B. (1936). An experimental investigation of a method of overcoming children's fears. *Child Development, 7*, 6-30.

Hutt, C. (1979). Play in the under-fives: Form, development and function. In J.G. Howells (Ed.), *Modern perspectives in the psychiatry of infancy* (pp. 95-141). New York: Brunner/Mazel.

Inhelder, B., & Piaget, J. (1964). *The growth of logical thinking from childhood to adolescence*. New York: Basic Books.

Jersild, A.T., & Holmes, F.B. (1935). Children's fears. *Child Development Monograph, 20*.

Jersild, A.T., & Holmes, F.B. (1936). Methods of overcoming children's fears. *Journal of Psychology, 1*, 75-104.

Jersild, A.T., Markey, F.V., & Jersild, C.L. (1933). Children's fears, dreams, wishes, daydreams, likes, dislikes, pleasant and unpleasant memories. *Child Development Monograph, 12*.

Johnson, P.A., & Stockdale, D.F. (1975). Effects of puppet therapy on palmar sweating of hospitalized children. *The Johns Hopkins Medical Journal, 137*, 1-5.

Jones, M.C. (1924a). The elimination of children's fears. *Journal of Experimental Psychology, 7*, 382-390.

Jones, M.C. (1924b). A laboratory study of fear: The case of Peter. *Journal of Genetic Psychology, 31*, 308-315.

Lapouse, R., & Monk, M.A. (1959). Fears and worries in a representative sample of children. *American Journal of Orthopsychiatry, 29*, 803-818.

Leitenberg, H., & Callahan, E.J. (1973). Reinforced practice and reduction of different kinds of fears in adults and children. *Behaviour Research and Therapy, 11,* 19-30.

Lucariello, J. (1987). Spinning fantasy: Themes, structure, and the knowledge base. *Child Development, 58(2),* 434-442.

Marks, I.M., & Gelder, M.G. (1966). Different onset ages in varieties of phobia. *American Journal of Psychiatry, 123,* 218-221.

Millar, S. (1968). *The psychology of play.* Baltimore: Penguin Books.

Miller, L.C., Barrett, C.L., Hampe, E., & Noble, H. (1972). Factor structure of childhood fears. *Journal of Consulting and Clinical Psychology, 39(2),* 264-268.

Milos, M.E., & Reiss, S. (1982). Effects of three play conditions on separation anxiety in young children. *Journal of Consulting and Clinical Psychology, 50(3),* 389-395.

Peller, L.E. (1952). Models of children's play. *Mental Hygiene, 36,* 66-83.

Peller, L.E. (1954). Libidinal phases, ego development, and play. *Psychoanalytic Study of the Child, 9,* 178-198.

Piaget, J. (1962). *Play, dreams, and imitation in childhood.* New York: Norton.

Rubin, K., Fein, G., & Vandenberg, B. (1983). Play. In E. Mavis Hetherington (vol. ed.), P.H. Mussen (series ed.), *Handbook of child psychology: Vol 4. Socialization, personality, and social development* (4th ed., pp. 693-774). New York: John Wiley.

Sheslow, D.V., Bondy, A.S., & Nelson, R.O. (1982). A comparison of graduated exposure, verbal coping skills, and their combination in the treatment of children's fear of the dark. *Child and Family Behavior Therapy, 4(2),* 33-45.

Singer, J.L. (1973). *The child's world of make-believe: Experimental studies of imaginative play.* New York: Academic Press.

Singer, J.L., & Singer, D.G. (1976). Imaginative play and pretending in early childhood: Some experimental approaches. In A. Davids (Ed.), *Child personality and psychopathology: Current topics* (Vol. 3, pp. 69-112). New York: John Wiley.

Smith, P.K., & Vollstedt, R. (1985). On defining play: An empirical study of the relationship between play and various play criteria. *Child Development, 56,* 1042-1050.

Tizza, V., Hurwitz, I., & Angoff, K. (1970). The use of a play program by hospitalized children. *Journal of the American Academy of Child Psychiatry, 9*, 515-531.

Vaillant, G.E. (1977). *Adaptation to life*. Boston: Little, Brown.

Weisler, A., & McCall, R.B. (1976). Exploration and play: Resume and redirection. *American Psychologist, 31(7)*, 492-508.

Winer, B.J. (1971). *Statistical principles in experimental design* (2nd ed.). New York: McGraw-Hill.

Winnicott, D.W. (1971). *Playing and reality*. London: Tavistock.

APPENDIX A

STORY THEMES FOR PLAY SESSION

Cooking (benign1)

"Now let's do something different. See this girl/boy? This girl/boy is very, very hungry and wants something to eat. S/he is going to cook something in the kitchen. S/he is thinking about what s/he wants to cook. What happens next? Can you tell me a story about it?"

Shopping (benign2)

"Let's make up another story. See this girl/boy? This girl/boy was very, very good and his mom and dad want to get her/him a nice present. All of them are going to go shopping for the present. S/he is thinking about what s/he would like to buy. What happens next? Can you tell me a story about it?"

Dark (scary1)

"Let's make up a different story. See this girl/boy? This girl/boy doesn't like to go to sleep at night because it's so dark in her/his room. It's late and time for her/him to go to bed. Here comes daddy/mommy to turn off the light. What happens next? Can you tell me a story about it?"

Travelling (benign3)

"Now, let's make up another story. See this girl/boy? This girl/boy is going on a vacation with her/his mom and dad. All of them are will ride in the car together. S/he is thinking about how much fun the trip will be. What happens next? Can you tell me a story about it?"

Dog (scary2)

"Let's make up another story. See this girl/boy? This girl/boy doesn't like big dogs because s/he thinks that dogs might bite her/him. One day, s/he went outside to play. Then a big dog walked over and looked at her/him. What happens next? Can you tell me a story about it?"

Birthday (benign4)

"Now, let's make up another story. See this girl/boy? Today is this girl/boy's birthday and s/he is going to be _____ years old. S/he is going to have a birthday party and all her/his friends are coming. S/he is thinking about how much fun the birthday party will be. What happens next? Can you tell me a story about it?"

APPENDIX B

CODING MEASURES FOR CHILDREN'S PLAY

(I) Characteristics that define pretend play (Smith & Vollstedt, 1985)

(1) Positive affect -- The behavior shows positive affect, that is, it is pleasurable and enjoyable to the child. Scored as present or absent.
(2) *Flexibility* -- The behavior shows flexibility, that is, it shows some amount of variation in form or context. Scored on a scale from zero (no flexibility) to three (high flexibility).
(3) *Nonliterality* -- The behavior is nonliteral, that is, it is not carried out seriously but has an "as if" or pretend quality. Scored as present or absent.

A behavior was considered nonliteral if it met one or more of the following criteria described by Fein (1981):

(a) familiar activities are performed in the absence of the necessary materials or usual social context (e.g., child pretends to sleep when it is not bedtime)
(b) the activities are not carried out to their usual outcome (e.g., child pretends to, but does not sleep)
(c) inanimate objects are treated as animate
(d) one object or gesture is substituted for another (e.g., a block becomes a lion in play)
(e) the child performs an activity usually done by someone or something else (e.g., the child roars like a lion)

(II) Duration of play

The latency (i.e., the time interval between the introduction of the story adn the beginning of play) and the length of time each theme was sustained (i.e., the amount of time from the first nonliteral act to the end of the story) were recorded.

(III) Maturity of play

Constructiveness scale (Barker et al., 1941/1976; Cline et al., 1979)

(1) touching or holding with minimal manipulation or examination
(2) primitive, inadequate, or undeveloped use -- as in banging a couple of blocks together, apparently for fun

(3) investigation and careful examination or purposeful activity of a nonplay nature, such as arranging materials
(4) appropriate activity at unelaborated level including brief pretend activities, such as rocking a stuffed animal like a baby, and simple constructions, such as making clay "pancakes"
(5) appropriate activity at developed level – fantasy and/or construction, such as undressing a doll and putting it to bed or building a simple block structure
(6) more highly elaborated fantasy or construction activities of longer duration
(7) highly elaborate fantasy activities involving integration of several play materials, such as cooking clay pancakes on a stove made of blocks for dolls to eat

Level of self-other relations (Bretherton, 1984; Lucariello, 1987)

(1) self-referenced pretense
(child produces actions associated with his/her own behavior outside of the real situation – e.g., sleeping, eating)
(2) representing another's behavior
(child produces actions associated with the behavior of others – e.g., child pours coffee)
(3) passive other-referenced pretense
(child projects his/her own behavior onto another – e.g., child puts doll in bed)
(4) active other-referenced pretense
(child's attribution of action potential, needs, wants, or feelings to animate or lifelike objects – e.g., child sings or talks to doll as doll is put to sleep and makes statements such as "baby wants to sleep")
(5) use of lifelike or animate objects as agents
(child acts for a doll or pretends doll could act on its own – e.g., child becomes a vicarious actor, speaks for a doll)
(6) collaborative role play
(child acts in accordance with the representation of two or more roles either by adopting two roles or by coordinating the roles with another – e.g., child pours coffee [server]; child drinks coffee [diner])
(7) replica play with roles
(child's animation of lifelike objects without actively participating in the plot – e.g., child assigns daddy role to puppet, assigns child role to doll and has figures interact with one another)

(IV) Imaginativeness of play

Imaginativeness scale (Singer, 1973)

(1) child is extremely unimaginative in play; introduces no pretend elements into the play situation and is extremely stimulus-bound by the play materials
(2) child is slightly imaginative in play, occasionally introducing brief pretend elements into the play situation but not staying with any pretend situation for very long
(3) child shows a moderate amount of pretending in play, but it is not very removed from the actual stimulus situation. There is little organization or consistency of pretense or role-playing -- considerable changing from one activity to another
(4) child shows a substantial amount of pretend elements in play, spontaneously creating make-believe situations, showing some originality in pretending, and not changing activities very often
(5) child shows high originality in the uses of toys and play materials; very high number of pretend elements in play, along with high organization of activity and role-playing

Transformed/substitute and imaginary object use (Lucariello, 1987)

(1) transformed/substitute objects: actual and known objects designated as other objects
(2) imaginary object attributions: reference to features or states of imaginary objects, e.g., "delicious" tea

(V) Development of theme in play (Hetherington et al., 1979)

Children's play episodes were coded in terms of eight types of themes:

(1) aggression and threat
(2) exploration, discovery, adventure, curiosity
(3) achievement, skill, mastery
(4) fame, power, aggrandizement, adulation by others, superiority
(5) nurturance and caretaking
(6) separation, loss, isolation, rejection
(7) daily routines (specify)
(8) others (specific theme noted by observer)

(VI) Aggression and dominance in play

Aggression

The level of aggression demonstrated in each play episode was rated on a scale from zero (no aggressive acts) to three (many aggressive acts). Aggression in play was also coded as being either self-directed or other-directed.

Dominance

Dominance was defined as situations where the usual relationships of power were reversed (e.g., child sent parent character to bed without supper). The number of pretend play acts in which the child assumed a position of dominance was counted.

(VII) Activity levels during play

The level of physical activity of children during each play episode was rated on a scale from one (low) to three (high).

(VIII) Avoidance of play

Some of these measures counted the number of task-irrelevant behaviors such as: frequently making comments about toys or other objects in the room, answering "I don't know" or "What happens next" repeatedly to the experimenter's questions, ending the story early or abruptly, or refusing to play about the suggested topic and substituting a different theme.

In addition, the experimenter's level of interaction with the child (i.e., the amount of effort and coaxing involved on the part of the experimenter to get the child interested in the play) was coded on a scale from one to three.

(IX) Concentration during play

Concentration scale (Singer, 1979)

(1) child shows brief or little attention to or absorption in activities, aimless wandering, high distractibility, many questions to observer
(2) engages in superficial play with toys and play material while looking around the room, staring passively, talking to observer; changes toys and/or activities frequently
(3) child responds with moderate interest to the toys or play activities; changes activities less often but still some distractibility
(4) child shows good absorption in play activity; no change of activity during a five-minute segment; little or no tangential behavior or conversation pertaining to activities other than the one at hand
(5) shows intense absorption in play activity; stays with one activity for a long period of time; may not even respond to direct questions from observer

(X) Affect during play

Each play episode was scored in one of eleven affect categories (Hetherington et al, 1979)

(1) lively-excited
(2) happy, ebullient
(3) loving, affectionate
(4) angry, hostile, threatening
(5) proud, satisfied
(6) unhappy, sad, depressed
(7) anxious, fearful
(8) guilty, ashamed, embarrassed
(9) involve[illegible] oriented concentration
(10) apathy, distractible
(11) other

Table 1
Parents' Ratings of Fear

Group	Story						
	Cooking	Party	Shopping	Trip	Dark	Dog	Other
Non-Anxious	1.13(.34)	1.17(.48)	1.04(.20)	1.13(.34)	1.54(.51)	1.38(.49)	3.20(1.01)
Dark-Anxious	1.33(1.15)	1.42(.67)	1.00(0)	1.25(.45)	3.92(.67)	1.33(.49)	3.70(1.16)
Dog-Anxious	1.00(0)	1.58(1.16)	1.00(0)	1.17(.58)	1.83(.39)	3.67(.65)	3.33(1.03)
Total	1.14(.62)	1.33(.75)	1.02(.14)	1.17(.43)	2.21(1.13)	1.94(1.14)	3.39(1.05)

Table 2
Means for Dog-Anxious and Not Dog-Anxious Children

Measure		Story					
		Cooking	Party	Shopping	Trip	Dark	Dog
Play Quality	Anxious	-.44	.04	-.77	-2.13	-2.33	-4.05*
	Non-Anxious	.19	-.03	.08	.61	.61	1.28*
Flexibility	Anxious	1.08	1.25	1.46	1.25	1.25	.92
	Non-Anxious	1.53	1.58	1.57	1.59	1.44	1.57
Latency	Anxious	5.00	13.00	17.62	13.92	12.00	34.88*
	Non-Anxious	15.79	7.86	20.81	12.18	10.28	11.11*
Duration	Anxious	149.54	208.71	147.25	159.33	148.54	145.58
	Non-Anxious	177.81	208.49	171.96	189.75	206.01	156.97
Aggression	Anxious	.00	.67	.17	.17	.00	.33
	Non-Anxious	.14	.31	.25	.42	.46	.53
Exp. Interaction	Anxious	1.50	1.79	1.54	1.62	1.58	2.04
	Non-Anxious	1.57	1.64	1.47	1.59	1.49	1.67
Number of Comments	Anxious	.90	.96	.67	.42	.54	.33
	Non-Anxious	.98	.84	.49	.64	.40	.39
Number of Imaginary Obj	Anxious	.13	.08	.25	.50	.25	.42
	Non-Anxious	.12	.17	.28	.39	.21	.33

Table 3
Means for Dark-Anxious and Not Dark-Anxious Children

Measure		Story					
		Cooking	Party	Shopping	Trip	Dark	Dog
Play Quality	Anxious	-1.64	.94	.25	-.43	-.55	2.82
	Non-Anxious	.60	-.13	.19	.28	.44	-.71
Flexibility	Anxious	1.29	1.58	1.54	1.25	1.25	1.71
	Non-Anxious	1.46	1.47	1.54	1.60	1.44	1.31
Latency	Anxious	9.46	9.88	36.79	15.83	15.29	10.42
	Non-Anxious	14.31	8.90	14.42	11.54	8.93	19.26
Duration	Anxious	172.08	247.54	143.71	160.54	235.75	169.04
	Non-Anxious	170.29	195.54	173.14	189.35	176.94	149.15
Aggression	Anxious	.00	.50	.08	.75	1.00*	.75
	Non-Anxious	.14	.36	.28	.22	.31*	.21
Exp. Interaction	Anxious	1.67	1.75	1.46	1.54	1.38	1.67
	Non-Anxious	1.51	1.65	1.50	1.62	1.56	1.79
Number of Comments	Anxious	.96	1.25	.08	1.00	.46	.33
	Non-Anxious	.96	.54	.68	.44	.43	.39
Number of Imaginary Obj	Anxious	.17	.17	.17	.42	.12	.33
	Non-Anxious	.31	.14	.31	.42	.25	.36

Table 4
Children's Responses to Post-Session Question for Self

Story	Group	Response		
		Fun	Scary	Both
Cooking				
	Anxious	22	2	0
	Non-Anxious	20	3	1
	Total	42	5	1
Party				
	Anxious	22	2	0
	Non-Anxious	23	1	0
	Total	45	3	0
Shopping				
	Anxious	24	0	0
	Non-Anxious	21	2	1
	Total	45	2	1
Trip				
	Anxious	24	0	0
	Non-Anxious	22	1	1
	Total	46	1	1
Dark				
	Anxious	19	4	1
	Non-Anxious	15	7	2
	Total	34	11	3
Dog				
	Anxious	20	4	0
	Non-Anxious	20	3	1
	Total	40	7	1

Table 5
Children's Responses to Post-Session Question for Others

Story	Group	Response		
		Fun	Scary	Both
Cooking				
	Anxious	22	2	0
	Non-Anxious	22	0	2
	Total	44	2	2
Party				
	Anxious	23	1	0
	Non-Anxious	20	1	3
	Total	43	2	3
Shopping				
	Anxious	23	1	0
	Non-Anxious	23	1	0
	Total	46	2	0
Trip				
	Anxious	23	0	1
	Non-Anxious	20	0	4
	Total	43	0	5
Dark				
	Anxious	15	7	2
	Non-Anxious	5	13	6
	Total	20	20	8
Dog				
	Anxious	14	6	4
	Non-Anxious	6	14	4
	Total	20	20	8